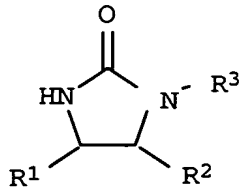
Process for the preparation of chiral imidazolidin-2-ones

Abstract

The invention relates to a process for preparing chiral imidazolidin-2-ones of the formula I



(I),

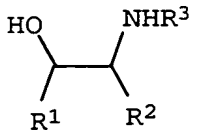
in which

R^1 is C_1-C_8-alkyl, cyclohexyl, phenyl, a C_1-C_6-alkyl-, halo-, nitro-, C_1-C_6-alkoxy-, C_1-C_6-alkylmercapto- or CF_3-substituted phenyl radical, naphthyl or a C_1-C_6-alkyl-, halo-, nitro-, C_1-C_6-alkoxy- or CF_3-substituted naphthyl radical,

R^2 is C_1-C_8-alkyl, C_2-C_8-alkenyl, cyclohexyl, phenyl or a phenyl-C_1-C_6-alkyl radical which may be substituted by a nitro, C_1-C_6-alkoxy, methylenedioxy or CF_3 radical, and

R^3 is C_1-C_{12}-alkyl, C_2-C_8-alkenyl, cyclohexyl, phenyl or a C_1-C_6-alkyl-, halo-, nitro-, C_1-C_6-alkoxy-, methylenedioxy-, dialkylamino- or CF_3-substituted phenyl radical,

by reacting a compound of the formula II or the salt thereof



(II)

in which R^1, R^2 and R^3 have the abovementioned meaning,

with urea in the presence of an involatile ammonium salt, wherein the reaction is carried out in the presence of an aprotic polar organic solvent.